Transit-Oriented Development

Recommendations and Guidelines

A Resilient Communities Project–GreenStep Cities Guide

Resilient Communities Project
University of Minnesota
Driven to Discover℠

This report was produced by the Resilient Communities Project (RCP), a program at the University of Minnesota whose mission is to connect communities in Minnesota with U of MN faculty and students to advance local sustainability and resilience through collaborative, course-based projects. RCP is a program of the Center for Urban and Regional Affairs (CURA). More information at http://rcp.umn.edu. Funding for the report was provided by GreenStep Cities, a program of the Minnesota Pollution Control Agency, through a grant from the McKnight Foundation. More information at https://greenstep.pca.state.mn.us.

This publication may be available in alternate formats upon request.

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Acknowledgements

This document was prepared by the University of Minnesota's Resilient Communities Project (RCP) for the Minnesota GreenStep Cities Program. This tool was developed from a report completed by University of Minnesota graduate students in partnership with RCP and the City of Minnetonka during the 2012–2013 academic year. Although the original report was developed for a specific community, students' findings and recommendations have been synthesized and generalized, and additional research has been conducted where necessary, to produce a resource that is relevant to communities throughout Minnesota.

Transit-Oriented Development in Minnetonka

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INTRODUCTION

Transit Oriented Development (TOD) refers to mixed-use, walkable developments located around transit stations. In order to be a successful TOD location, the area must incorporate mixed-uses, walkable design, and location-efficient development.[1] These three elements support the five main goals of TOD:[2]

1. **Location Efficiency:** Siting housing, particularly affordable housing, close to transit stations.
2. **Rich Mix of Choices:** Providing a mix of uses and destinations within walking distance of the transit station.
3. **Value Capture:** Measuring the economic benefits associated with TOD.
4. **Placemaking:** Creating environments that are both functional and enjoyable for pedestrians.
5. **Resolution of Tension Between Node and Place:** Transportation nodes are connection points for many types of transit. Incorporating a sense of place includes human-scale development, walkability, and mixed uses.

The case studies below are meant to give context and recommendations for a community looking to begin the process of planning for TOD. Early in this process, the city should review these recommendations within the context of the three principle TOD elements and five overarching goals. The most important aspect of creating a successful TOD plan is to develop a clear vision for the site. These case studies will help the city to develop a realistic vision with supporting policy to maintain that vision. Lessons learned from the case studies will help to guide the planning process, and examples may provide insight into successful TOD projects.

Summary of Case Studies – Overview

These case studies were selected because each provides a unique example of TOD projects, primarily in suburban areas, at different stages in the development process. While the case studies vary geographically, the lessons learned in each case will be applicable to many Minnesota cities.

CONTRA COSTA

REASON SELECTED: Evolution from a park and ride to a mixed use TOD occurred over several decades, but a sturdy policy framework ensured that each new development fit within the long-term vision for the site.

TOD SIZE: 7,000 persons, 6,000 jobs spread over 125 acres.

MSA	CITY POPULATION	CITY INCOME	SIZE AND DENSITY	MODE	TRANSIT START DATE/ STATION OPENING	PLANNING START DATE/ TOD OPENING
San Francisco	33,152	$78,765	7 mi^2 4,688 $ppmi^2$	Rapid transit subway	1973 (transit start date)	1983 (TOD implemented 2010)

MOCKINGBIRD STATION

REASON SELECTED: **Dual auto- and transit-orientation. Provides an example of how a privately owned redevelopment project fundamentally changed a city's TOD policies.**

TOD SIZE: 10 acre redevelopment with 200+ apartments, 500,000 SF of rentable building area, 178,000 SF of retail, 137,000 SF of office space, and 520,000 SF of parking (1,580 parking spaces).

MSA	CITY POPULATION	CITY INCOME	SIZE AND DENSITY	MODE	TRANSIT START DATE/ STATION OPENING	PLANNING START DATE/ TOD OPENING
Dallas	1,197,816	$42,259	341 mi^2 3,518 $ppmi^2$	LRT and Bus	1997 (station opening)	2001 (TOD opening)

CHAMBLEE

REASON SELECTED: Represents what is possible regarding TOD in a complex site with limited public resources available to facilitate private investment.

TOD SIZE: 160 acres of infill and redevelopment.

MSA	CITY POPULATION	CITY INCOME	SIZE AND DENSITY	MODE	TRANSIT START DATE/ STATION OPENING	PLANNING START DATE/ TOD OPENING
Atlanta	9,892	$54,819	3.18 mi^2 3,115 $ppmi^2$	Rapid transit subway	1982 (station opening)	2001 (TOD opening)

ENGLEWOOD

REASON SELECTED: Dual auto- and transit-orientation, which remains today. Provides an example of a city-owned and city-led redevelopment project.

TOD SIZE: 50 acre redevelopment, including 440 apartments, 330,000 SF of retail space, 300,000 SF of office space, and 50,000 SF of restaurants. Totals more than 800,000 SF of new development.

MSA	CITY POPULATION	CITY INCOME	SIZE AND DENSITY	MODE	TRANSIT START DATE/ STATION OPENING	PLANNING START DATE/ TOD OPENING
Denver	30,255	$43,962	6.56 mi^2 4,614 $ppmi^2$	LRT	2000 (transit start date)	1994 (planning began)

AURORA

REASON SELECTED: An additional Denver-area case study with newer suburban stations in an expanding LRT network, much like the Twin Cities region.

TOD SIZE: Under development.

MSA	CITY POPULATION	CITY INCOME	SIZE AND DENSITY	MODE	TRANSIT START DATE/ STATION OPENING	PLANNING START DATE/ TOD OPENING
Denver	325,078	$50,468	154.73 mi^2 2,100 $ppmi^2$	LRT and Electric Multiple Unit (EMU) commuter rail	2016 (projected start date)	2007 (planning began)

ALEXANDRIA

REASON SELECTED: Shows it is possible to transform a suburban business park of mid-rise buildings and surface parking into a thriving TOD.

TOD SIZE: 300 acres with over 12 million SF of office, retail, hospitality, and residential leasable space.

MSA	CITY POPULATION	CITY INCOME	SIZE AND DENSITY	MODE	TRANSIT START DATE/ STATION OPENING	PLANNING START DATE/ TOD OPENING
Washington D.C.	139,966	$82,899	15 mi^2 9,314 $ppmi^2$	Rapid transit subway	1983 (station opening)	1998 (TOD opening)

ROSSLYN-BALLSTON CORRIDOR

REASON SELECTED: First and most successful examples of TOD in the US. A clear vision, strong public participation, and an effective policy framework contributed to the success of the Corridor and can be applied to developing TODs regardless of their setting.

TOD SIZE: 2 square miles, 23,053 persons and 48,000 jobs spread over five station areas. 22 million SF of office, 2.8 million SF of retail.

MSA	CITY POPULATION	CITY INCOME	SIZE AND DENSITY	MODE	TRANSIT START DATE/ STATION OPENING	PLANNING START DATE/ TOD OPENING
Washington D.C.	207,627	$99,651	26 mi^2 7,994 $ppmi^2$	Rapid transit subway	1961 (corridor development) 1972 (TOD planning)	1979 (transit start date)

BLOOMINGTON

REASON SELECTED: Local example of a mixed-use TOD project in the I-494 corridor.

TOD SIZE: 50 Acres.

MSA	CITY POPULATION	CITY INCOME	SIZE AND DENSITY	MODE	TRANSIT START DATE/ STATION OPENING	PLANNING START DATE/ TOD OPENING
Twin Cities	82,893	$60,150	34.82 mi^2 2,390 $ppmi^2$	LRT	2004 (transit start date)	2019 (estimated)

Recommendations for Successful TOD Projects

ESTABLISH A CLEAR VISION FOR THE CITY'S STATION AREAS

If only one lesson could be gleaned from the transit-oriented development research presented in the case studies, it is that there is no single prescription for successful TOD implementation. Each TOD faced unique challenges based on its setting and the circumstances from which it evolved. However, the TODs that most effectively mitigated challenges were the ones that established a clear long-term vision of the site. The key is to develop this vision long before the first train passes through the station. A clear long-term vision requires:

- the purposeful transition from node to place
- a policy framework that remains effective through the evolution of the station area
- partnerships with the private and non-profit sector
- a creative mix of land uses surrounding the station.

Though rail transit may have been the catalyst for redevelopment, careful and intentional planning led to the viability of the respective TODs.

Facilitate a purposeful transition from node to place

A TOD is a node in the sense that it is a connecting point for many types of transit. Rail passengers, buses, cars, bikers, and walkers converge at one point creating a need for intensive infrastructure and system-wide connectivity. Strong ridership validates the existence of a station as well as the relative effectiveness of the entire transit system. However, too much space devoted to transportation can detract from the sense of "place". Walkability, compact development, and human-scale urban design are equally as important as transportation infrastructure in generating hubs of activity and investment.

A long-range plan must depict a setting that balances both node and place, but because sites mature slowly they are often defined as a node long before they are identified as a place. Creating interesting places at the outset of transit service is difficult because street-level activity such as retail requires a core group of residents or employees before it can be viable.

An excellent example of this transition occurred at the Pleasant Hill BART station in Contra Costa, CA. Early planning efforts in Contra Costa succeeded in large part due to consensus reached amongst all stakeholders as well as a consistent and supportive policy framework. This strong foundation engendered trust, stability, and predictability between the County government, developers, and the community over the following 30 years.

Develop a clear policy framework

Perhaps the most difficult, yet most important aspect of crafting strong policy framework is balancing long-term development objectives with short and mid-range goals. The most successful policy frameworks in the case studies contained Development Management Plans that listed measurable goals as well as the respective entities responsible for pursuing those goals. This mechanism organizes goals and objectives, and sets forth specific policies geared toward reaching them. Replete with action-oriented language, the Development Management Plan identifies measurable steps that evaluate progress toward each objective as well as the responsible party to achieve such. In Contra Costa, clear objectives were set forth in a thorough Development Management Plan. It included action-oriented steps required to meet the objectives, benchmarks used to measure progress, and the parties responsible for each of the goals. The objectives were thorough, directive, and specific. In addition, they were written to be intentionally lenient so developers would not be scared away. When action-oriented and specific policies were used, sites progressed.

Unique multi-purpose site design
Coordinating the interplay between node and place has given way to a variety of creative land use arrangements that simultaneously facilitate transit and encourage place-based activities.

Several methods for multi-purpose site design were used in the researched case studies.

1 CONTRA COSTA

A landscaped square adjacent to the station serves as both a drop-off point for riders and a public park.

2 ROSSLYN-BALLSTON

"Bulls-eyes" of redevelopment feature highest density developments closest to the station. Careful buffering was used to preserve the neighborhoods that existed beyond the station area. One noteworthy aspect of this compact development scheme is that vehicular traffic has only increased moderately within and surrounding the Corridor even though density has increased substantially.

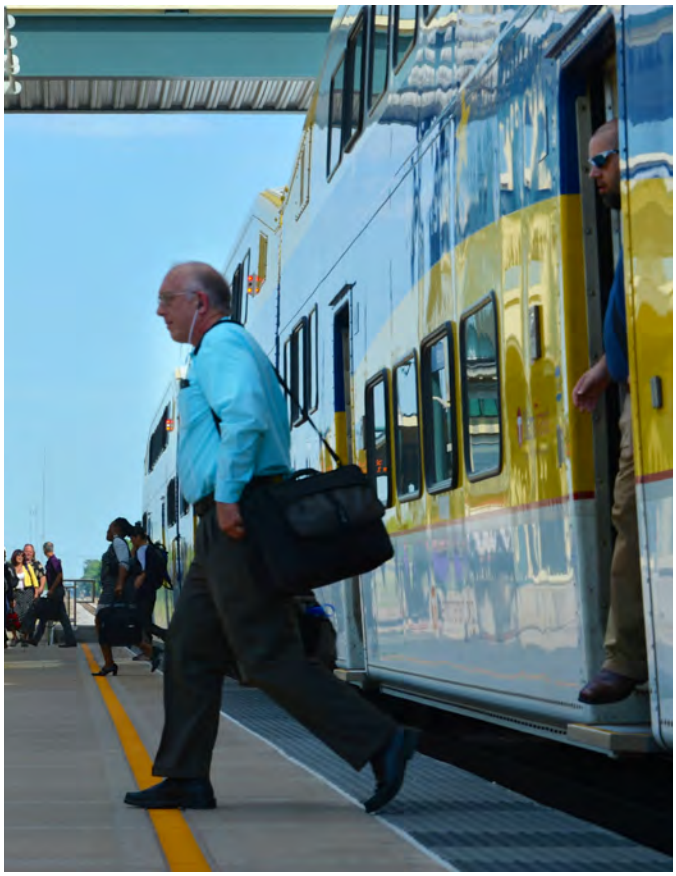
Site plan and development review processes were used in Rosslyn-Ballston and Alexandria. These processes allow for more control in development around the station area. In both cases, higher density development can occur via a site review process despite existing zoning restrictions.

Public Participation
In addition to initial and sustained public involvement, collaborating with both the private sector and local organizations has led to successful TOD implementation. The rationale is simple – seeking the help of experts in their respective fields will result in policies that are well thought out and comprehensive. Public/private partnerships allow each entity to perform the duties for which they are best suited, encourage private responsibility, and mobilize private resources for public goods. In addition, enlisting the help of local groups can give planners and policy makers the insight and perspective that are paramount to best practice research conducted by the city. Of course, balancing the various needs of interest groups will inevitably leave some groups more satisfied than others, but the overall policy framework will be better aligned to serve the needs of the community.

USE AN APPROPRIATE ZONING FRAMEWORK TO ACHIEVE THIS VISION

Successful transit-oriented development is contingent on innovative, but consistent and predictable review processes. Unique approaches are utilized in all of the cities examined in this report, but Planned Unit Developments (PUDs) are the most common. Through a PUD process, a developer is not required to abide by all zoning regulations if the development meets density and land use goals set by the community.[3]

"Seeking the help of experts in their respective fields will result in policies that are well thought out and comprehensive."



Successful PUD Strategies:

- **Require developer-led public meetings early in the design and application process.** These meetings should be led by the developer, however the presence of city planning staff can help streamline the process by answering questions, describing the process, and interpreting the documents presented. Since increased developer risk is a downside of the PUD approach, early public meetings can reduce public uncertainty, which subsequently reduces the potential for public backlash. The net effect is reduced developer uncertainty.
- **Require pre-meetings between the city and the developer before the application is even submitted.** This allows the staff to share the city's concerns and to address possible roadblocks before a submission is made. In light of the 60-day rule for the review of development applications in Minnesota, this can help minimize uncertainty for both the developer and the Planning Commission or City Council.
- **Use a point system for PUD evaluation.** This is the approach taken by the City of Minneapolis, which has published standards and criteria for PUDs. Various amenities are worth a different number of points and a minimum number of points are required as a part of the PUD application. Density bonuses can be awarded for a variety of housing types and amenities. Again, for this to be successful in other cities, the development of a possible point system needs to follow the development of a clear set of city and public priorities that would then be used as the foundation for the point system. More on Minneapolis' approach can be found in the city's PUD ordinance Chapter 527, Article 2.309.

Include Form-Based Code (FBC) elements in a portion of a PUD ordinance. FBC considers the entire built form of a space rather than regulating specific land uses independently. For example, FBC would regulate not only the size of a building, but the size of that building relative to others on the block as well as how that land use relates to others on the same street.[4] FBC elements in a PUD ordinance would include qualitative elements in relation to the station character. For example, images, pictures, statements of character, and building massing requirements that flow from the station area planning process. Incentives should also be included in the ordinance, with density being one

Form Based Code TOD Examples

The Form-Based Codes Institute (FBCI) gathers the best examples of form-based codes from communities across the U.S. and abroad. Below are examples of TOD code. To view the full reference, visit: goo.gl/fFLK07

Azusa Development Code
The code is mandatory and separates the City into 17 planning areas of distinct character.

CBD Code and Architectural Guidelines for Delray Beach
The highly descriptive code and guidelines provide a strong and enforceable framework for good urban development.

Farmers Branch Station Area Code
The Station Area is located within a struggling commercial district adjacent to interstate highway interchange.

Leander TOD Code
Leander's code shows the initiative of a municipality preparing for the development expected to result from planned transportation improvements.

Central Petaluma SmartCode
Through a community driven process, the city developed a clear vision for the future of Central Petaluma.

Pleasant Hill BART Station
The effort to create the Pleasant Hill BART Station master plan and code was initiated by the County and an interested developer.

Santa Ana Transit Zoning Code
The City of Santa Ana's code thoughtfully focuses on the subtleties of building placement, massing, and building and frontage types for an existing 457-acre community.

Wyandanch Straight Path Corridor Code
The Town of Babylon Downtown Wyandanch and Straight Path Corridor Form-Based Code is designed to spur the revitalization of an economically distressed area.

of the most prominent. Another important policy and legal objective that emerged from the case studies was the need for giving pedestrians as much if not more precedence than automobiles within the station areas. At a very minimum, the PUD requirements need to allow for the site to be developed through an evolutionary process, in accordance with the city's long-term vision.

Therefore, the following options may be considered in the PUD requirements or overlay zone:

- Allow long-term net residential densities that are higher than initially anticipated, perhaps up to 50 du/ac, though lower densities would be permitted initially by right, up to 30 du/ac with a minimum of 20 du/ac to ensure more urban forms. Density bonuses could then be used to achieve the city's other qualitative objectives, filling in the gap between 30 du/ac and 50 du/ac.
- Build-to lines that draw buildings closer to primary roads in the TODs. This does not have to be a form-based code (FBC), but should include some critical form elements.
- Requirements for building access at street level along primary corridors.
- Shielded parking to increase the quality of the pedestrian environment.
- Shared parking requirements that permit shared parking with other existing developments within the same TOD. This would be used to help reduce overall parking levels in the TOD.
- A statement explaining how the proposed lease structure and proposed land uses will allow for site evolution over the long term, even if the project is not a multi-phase development.
- Horizontal mixed-use, or the integration of uses within the same area but not necessarily the same building, is perceived as less risky by lenders, so this development strategy is more "buildable" than the textbook definition of mixed-use. Development in this manner also facilitates building management and leasing.
- Smaller block lengths. The length of blocks within the Contra Costa TOD is capped at 200 feet to ensure that separate uses will still be proximate to one another and to facilitate circulation.
- Smaller permissible lot sizes for more urban residential types, such as townhomes or live-work units, when included in a TOD.

IDENTIFY AND DEVELOP KEY PARTNERSHIPS, INCLUDING DEVELOPERS

To ensure that development around station areas provides maximum value to the community, identifying and utilizing partnerships between key stakeholders is essential.

Local government support is key

The developers of successful TODs examined in this report had consistent, clear, and knowledgeable support from local governments. This is vital because the inherent uniquenesses of each site makes each TOD a one-of-a-kind experiment. Having the local government on board means more than financial assistance through TIF or other mechanisms, but a commitment to innovative problem solving, political support, and connections to knowledgeable outside groups.

Economic and market uncertainty of the past few years has required local governments to "grease the wheels" for TOD by providing assistance in a variety of ways. The use of public financial assistance can greatly assist in ensuring that the community sees public objectives realized. However, it is also important to clearly articulate when, where, and how public resources, for instance TIF, will be available. This will reduce developer uncertainty and improve the likelihood of publicly desirable outcomes. Ultimately, the city will be challenged to provide sufficient flexibility for the wide array of proposals and options that emerge, while also establishing clear standards for what is desired and permitted for the station areas.

"Having the local government on board means more than financial assistance..., but a commitment to innovative problem solving, political support, and connections to knowledgeable outside groups."

Characteristics of "the right developers"

1 Experience matters. The developer's portfolio should show examples of completed developments meeting a community's vision.

2 For this to be the case, a developer needs to believe in the vision. To ensure a commitment to the vision, the city should consider including a number of developers in its city-led site planning process.

3 The developer needs to be able to develop multiple land uses. The original developer's inability to do so caused substantial problems for Englewood, and ultimately led to the City having to become the master developer.

4 A developer needs to have the capability to work with complicated sites, and to perform land assembly at such locations.

5 An appropriate developer must be able to demonstrate a marriage of qualitative and quantitative elements in their developments, meeting baseline economic standards with a higher-than-average quality of the built environment.

Summary of Case Studies – Zoning and Implementation

The zoning frameworks for each case varied slightly, but the majority of the projects used a PUD framework. Zoning frameworks will depend on the context of the development. The city should consider early in the planning process which zoning framework will be most effective.

MSA	SETTING	CURRENT SYSTEM	ZONING FRAMEWORK	IMPLEMENTATION LEADER
CONTRA COSTA				
San Francisco	Suburban	BART - 5 lines, 44 stations, 104 miles of track	Planned-Unit Development	Mostly public sector
MOCKINGBIRD STATION				
Dallas	Urban	DART - 4 lines, 55 stations, 85 miles of track	By-right, adaptive reuse	Entirely private sector
CHAMBLEE				
Atlanta	Suburban	MARTA - 4 lines, 38 stations, 48 miles of track	Planned-Unit Development	Mostly private sector
ENGLEWOOD				
Denver	Suburban	RTD - 5 lines, 36 stations, 35 miles of track	Planned-Unit Development	Entirely public sector
AURORA				
Denver	Suburban	RTD - 5 lines, 36 stations, 35 miles of track	Individual parcels. Redevelopment triggers TOD zoning on a parcel-by-parcel basis.	Mostly private sector
ALEXANDRIA				
Washington D.C.	Urban	Metro - 5 lines, 86 stations, 103 miles of track	Planned-Unit Development	Equally public and private
ROSSLYN-BALLSTON CORRIDOR				
Washington D.C.	Urban	Metro - 5 lines, 86 stations, 103 miles of track	Individual parcels. Redevelopment limited to .25 mile around station. Site Plan Review used to achieve high-density.	Equally public and private
BLOOMINGTON				
Twin Cities	Suburban	MetroTransit - 1 line, 19 stations, 12 miles of track	Planned-Unit Development	Mostly private sector

BRT and TOD

The case studies listed above all focus on rail projects. While there is a variety of rail types considered, Bus Rapid Transit (BRT) TOD is an additional consideration. Many of the recommendations given above will apply to BRT TOD projects as well. For example, successful BRT TOD projects must also have a clear, long-term goal accompanied by long-range strategy plans to achieve that goal.[5] This may include zoning changes or policies that support TOD along BRT lines.

In addition to the recommendations listed for rail TOD projects, it is important for the city to convey a sense of permanence along a BRT line.[6] Developers want to be sure that investing along a BRT line will yield similar financial returns as investments along rail projects. Similarly, the speed and predictability of the line is important for developers.[6] If the line is not attractive to potential riders, usage will be low and developers will not have the same incentive to invest in the area.

Tools cities can use to incentivize TOD along BRT include dedicated funds to infrastructure and streetscape improvements along the line, density bonuses and other zoning incentives, and expedited permitting processes for development projects along BRT lines.[8]

A lack of institutional support and reserved funding for BRT TOD developments is a significant barrier for successful BRT TOD. Additionally, the absence of inter-agency partnerships and clear station plans can stall BRT TOD.[9]

As with rail TOD projects, cities should develop a clear set of goals along BRT lines. These goals should be accompanied by dedicated funding and agency support. Demonstrating the economic benefits and permanence of a BRT line is important. Developers are less likely to invest along a line if there is not a clear return on their investment.

Conclusion

The city will need to provide a clear and direct vision for the station areas and will need to back this up with zoning mechanisms. The city's regulations will need to balance the dual node and place identities of TODs and provide for a flexibility of land uses. The conversation about the particular balance of node and place of each station needs to be done publicly as a part of the community-wide planning process. Dynamic cross-sector collaborations were the secret ingredient in each of the successful TODs discussed above. Seeking out relevant strategic partnerships should be a priority for the city.

"Dynamic cross-sector collaborations were the secret ingredient in each of the successful TODs discussed above."

The common themes among the case studies included in this report point to a series of repeatedly needed ordinance and policy solutions for TODs. The first aspect of this is defining a clear vision and a set of defendable public objectives. This will likely emerge out of engagement processes with various key stakeholders from the public. For instance, in the Rosslyn-Ballston corridor, planners were aware of the high office demand and the influx of development proposals for Class A office space that would ensue. To ensure the corridor was balanced in its uses and orientation, the city enacted proactive policies to ensure an adequate supply of affordable housing was available, among other public objectives. These policies were then supported by strong ordinances and other legal mechanisms. To meet the demand for parking, the city utilized Travel Demand Management (TDM) in instances where parking demand outpaced the supply.

Additional TOD Resources

GENERAL TOD RESOURCES

National Resources and Technical Assistance for TOD
Part of the Federal Transit Administration and operated by Smart Growth America. The site includes a variety of print and video tools to help with TOD projects. These tools can be filtered based on specific criteria.
https://todresources.org/

Corridors of Opportunity
Twin Cities based initiative to promote equity along transit corridors. The site includes resources for TOD and equitable development along different transit corridors.
http://www.corridorsofopportunity.org/

The New Transit Town: Best Practices in Transit Oriented Development
Hank Dittmar and Gloria Ohland
http://islandpress.org/book/the-new-transit-town

Livability Resources from the Federal Transit Administration
Collection of resources organized into the following categories: FTA funded resources, DOT funded resources, EPA resources, State DOTs and regions, Stakeholders, Other publications that support the livable and sustainable communities initiative.
https://www.transit.dot.gov/regulations-and-guidance/environmental-programs/livable-sustainable-communities/livability-resources

Center for Transit Oriented Development
Database of policy research, print resources, place based work, and webinars.
http://ctod.org

Form Based Code Examples
http://formbasedcodes.org/codes/

BRT TOD RESOURCES

Bus Rapid Transit Practitioner's Guide
Outlines different elements of and considerations for BRT projects. Costs and effectiveness of BRT projects are highlighted throughout the report.
http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_118.pdf

Corridors of Opportunity BRT TOD
Collection of nation-wide resources on BRT TOD.
http://www.corridorsofopportunity.org/resources/brtod

Case Studies around BRT and TOD
Provides examples of BRT TOD in North America and Australia.
http://www.reconnectingamerica.org/assets/Uploads/brt_tod_report.pdf

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